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- ART. VI. — 1. *The Old Red Sandstone ; or, New Walks in an Old Field.* By HUGH MILLER, Author of "Foot-prints of the Creator," etc. Boston : Gould & Lincoln. 1851. 12mo. pp. 288.
2. *First Impressions of England and its People.* By HUGH MILLER. Boston : Gould & Lincoln. 1851. 12mo. pp. 430.
3. *The Course of Creation.* By JOHN ANDERSON, D. D. Cincinnati : William H. Moore & Co. 1851. 12mo. pp. 376.
4. *The Poetry of Science, or Studies of the Physical Phenomena of Nature.* By ROBERT HUNT, Author of "Panthea," "Researches on Light," etc. Boston : Gould & Lincoln. 1850. 12mo. pp. 383.

WHEN astrology became astronomy, and alchemy became chemistry, the change was not greater than when the science of geology, in its present form, was developed out of the crude fancies held by learned men at the time when fossil remains were first observed. That these could ever have belonged to living animals seems never to have occurred to the minds of the learned doctors of the sixteenth century, who supposed them to be the products of what was termed a "plastic nature;" and when Fracastoro announced his belief that they were the remains of animals which had once existed upon the earth, he encountered only incredulity and contempt. His opponents maintained that fossil shells were generated in the earth by fermentation, and acquired their peculiar forms through the "tumultuous movements of terrestrial exhalations." Elephant's tusks dug up in Italy were said to be nothing more than "earthy concretions;" and one writer, who published a work on the subject, illustrated with drawings of fossil shells, announced his conviction that they were stones which had assumed the appearance of shells through the influence of the heavenly bodies. The plastic force of nature was even made accountable for certain ancient vases which were disinterred at Rome; and all things bearing a resemblance to organic forms were but freaks of the same power. The race of observers of this class is not yet extinct, but their voices have no longer any effect except upon the

credulous and the ignorant. A few religious bigots, having dogmatically asserted that geology as it now stands is opposed to Mosaic history, doggedly close their eyes to all evidence offered by facts, and stand established in their ignorance like effigies representing the minds of a past age. For a long time, geology was a bugbear to the religious part of the world in general. Not many years ago, we saw the face of a religious man, and an intelligent one too, assume an expression of positive distress, when a suggestion was made that the first chapters of Genesis might not be the literal history of things done in seven of our ordinary days, but a brief and figurative summary of events that had occupied long ages in their progress and completion. Earnestly did he endeavor, as though striving to snatch a brand from the burning, to convince the theorist of the danger incurred by such trifling with the words of the Holy Scriptures. If we once began to question their truth, we should be led on from step to step till all faith would be replaced by infidelity. Such fears may now seem puerile to those who believe nature to be the work of His hand, so that it is a veritable Scripture no less than the written Word ; and who therefore feel sure that the two must agree. The Bible gains or loses nothing from the efforts of religious men who oppose science, or from scientific men who oppose religion. Nature and the Scriptures stand upon a basis of reality that no words of man have power to shake. It is the superficial and the timid inquirer alone who fails to find the eternal harmony existing between them. The leading asserters of the "development" theory are bad geologists, and the opponents of geology are not found among the most profound divines. A narrow religious sect may take the same stand against geology that Catholicism formerly took against astronomy ; but from the nature of the human mind, such opposition must be as futile now as it was then. Religious faith rests upon a very insecure basis if it can be maintained only by rejecting the conclusions of science and the evidence of the senses.

When "The London Record," in trying to write down the doings of the British Scientific Association, is driven to such an absurdity as to affirm, that for aught which appears to the contrary, the world might have been made yesterday, we know that the cause of geology is safe ; for the practical observer

will as readily be brought to believe that the bones dug up in a churchyard were created yesterday, and were never clothed with flesh, as that the fossil deposits in the lower depths of the earth were created fossils, and never belonged to living animals. There are those who take the ground that God created the earth full of such apparent remains of the past, in order to satisfy the craving inherent in the human mind for the contemplation of that which is venerable through its age. If such persons would turn the ingenuity they are now wasting upon such inane theories into the paths of true scientific inquiry, and show to the timidly pious how God's words and works have seemed to disagree only on account of our imperfect knowledge, there would be nothing to fear from the puny strivings of irreverent men who love their own theories better than the word of God ; and whose zeal to disprove that word proceeds from and is accompanied by a general neglect and ignorance of thorough scientific observation.

No writer has yet appeared whose powers seem so perfectly adapted to neutralize the works of the timidly pious, and of the boldly impious, as Hugh Miller. Born in the lower ranks of Scotch peasantry, with no advantages of education but such as a village common school afforded, and laboring until middle life as a common stone-cutter in the quarries, he has worked his way upward to a position as a scientific observer and writer that any man might be proud to occupy ; and yet without forgetting the class from which he sprang. While ignorant of much of the knowledge taught in schools, his mind was enriched by familiarity with the master minds of English literature ; and having a naturally fine imagination, his taste has been cultivated by such models, until he is able to embody his own thoughts in a style so eloquent as to charm the educated, and so clear and forcible as to attract the ignorant. Among scientific men, we think it would be difficult to name one who surpasses him in clearness, elegance, and force of style. His thoughts well to the surface as fresh and transparent as a living fountain ; and his descriptions are models of the power that brings the object vividly before the eye of the reader. Now that authors are prone to measure their productions by the amount of letter-press rather than by the number of ideas contained, it is refreshing to find so eminently popular a writer who uses words only because he

wishes to express ideas, who begins to write because he has something in his mind worth saying, and who stops as soon as he has given his ideas a form in sentences rarely containing a redundant word.

“The Old Red Sandstone” was the first purely scientific volume published by Mr. Miller; and it placed him at once in the very front rank of geological observers and writers. Not the least attractive portion of this volume is that which introduces us to a knowledge of the author’s own history, and tells us how he first became attracted to the study of geology, though without being conscious of what he was doing.

This work is designed for the general reader, and is therefore written in a style not exclusively scientific; for it was Mr. Miller’s desire to attract the minds of the uneducated towards intellectual pursuits, and he therefore strives to make the working men, among whom he so long labored, perceive that there is nothing in their position which shuts them out from the highest and noblest intellectual pursuits. The volume opens with an address to young working men, which beautifully shows the healthy tone of the writer’s mind and heart. We subjoin the whole of it.

“My advice to young working men, desirous of bettering their circumstances, and adding to the amount of their enjoyment, is a very simple one. Do not seek happiness in what is misnamed pleasure; seek it rather in what is termed study. Keep your consciences clear, your curiosity fresh, and embrace every opportunity of cultivating your minds. You will gain nothing by attending Chartist meetings. The fellows who speak nonsense with fluency at these assemblies, and deem their nonsense eloquence, are totally unable to help either you or themselves; or, if they do succeed in helping themselves, it will be all at your expense. Leave them to harangue unheeded, and set yourselves to occupy your leisure hours in making yourselves wiser men. Learn to make a right use of your eyes: the commonest things are worth looking at—even stones and weeds, and the most familiar animals. Read good books, not forgetting the best of all: there is more true philosophy in the Bible than in every work of every sceptic that ever wrote; and we would be all miserable creatures without it, and none more miserable than you. You are jealous of the upper classes; and perhaps it is too true that, with some good, you have received much evil at their hands. It must be confessed they have hitherto been doing comparatively

little for you, and a great deal for themselves. But upper and lower classes there must be, so long as the world lasts; and there is only one way in which your jealousy of them can be well directed. Do not let them get ahead of you in intelligence. It would be alike unwise and unjust to attempt casting them down to your own level, and no class would suffer more in the attempt than yourselves; for you would only be clearing the way, at an immense expense of blood, and under a tremendous pressure of misery, for another and perhaps worse aristocracy, with some second Cromwell or Napoleon at their head. Society, however, is in a state of continual flux: some in the upper classes are from time to time going down, and some of you from time to time mounting up to take their places—always the more steady and intelligent among you, remember; and if all your minds were cultivated, not merely intellectually, but morally also, you would find yourselves, as a body, in the possession of a power which every charter in the world could not confer upon you, and which all the tyranny or injustice of the world could not withstand.

“I intended, however, to speak rather of the pleasure to be derived, by even the humblest, in the pursuit of knowledge, than of the power with which knowledge in the masses is invariably accompanied. For it is surely of greater importance that men should receive accessions to their own happiness, than to the influence which they exert over other men. There is none of the intellectual, and none of the moral faculties, the exercise of which does not lead to enjoyment; nay, it is chiefly in the active employment of these that all enjoyment consists; and hence it is that happiness bears so little reference to station. It is a truth which has been often told, but very little heeded or little calculated upon, that though one nobleman may be happier than another, and one laborer happier than another, yet it cannot be at all premised of their respective orders, that the one is in any degree happier than the other. Simple as the fact may seem, if universally recognized, it would save a great deal of useless discontent, and a great deal of envy. Will my humbler readers permit me at once to illustrate this subject, and to introduce the chapters which follow, by a piece of simple narrative? I wish to show them how possible it is to enjoy much happiness in very mean employments. Cowper tells us that labor, though the primal curse, ‘has been softened into mercy;’ and I think that, even had he not done so, I would have found out the fact for myself.” pp. 1–3.

He then goes on to tell how, twenty years before the time of his writing, which was in 1841, (how is it that ten years passed away before any publisher was found ready to give

this delightful volume to us on this side the water?) he set forth with a heavy heart to commence a life in the quarries. He was still a boy, and "fond of the pretty intangibilities of romance, and of dreaming when broad awake;" and he anticipated nothing but weariness and disgust from this new life. He tells us that he "had been a wanderer among rocks and woods — a reader of curious books when he could get them — a gleaner of old traditionary stories;" and now, this was to be exchanged for a life in which he was to "toil every day that he might eat, and eat every day that he might toil." This first day proved, however, less unpleasant than he had anticipated. The novelty of the use of picks, wedges, and gunpowder, in breaking up the rocks, amused him so much, that the order from his employer to discontinue his labor at night-fall took him by surprise; and his first evening was brightened by the discovery, that to toil was not to be miserable. The next day he commenced his truly scientific observations in the Old Red Sandstone, which hitherto had been esteemed one of the least interesting, and poorest in fossil remains, of all geologic formations; but which, as his patient and industrious observations soon proved, is in fact one of the richest and most attractive. This day, so marked with the shadows of coming events, we will let him describe in his own words.

"The gunpowder had loosened a large mass in one of the inferior strata, and our first employment, on resuming our labors, was to raise it from its bed. I assisted the other workmen in placing it on edge, and was much struck by the appearance of the platform on which it had rested. The entire surface was ridged and furrowed like a bank of sand that had been left by the tide an hour before. I could trace every bend and curvature, every cross hollow and counter ridge of the corresponding phenomena; for the resemblance was no half resemblance — it was the thing itself; and I had observed it a hundred and a hundred times, when sailing my little schooner in the shallows left by the ebb. But what had become of the waves that had thus fretted the solid rock, or of what element had they been composed? I felt as completely at fault as Robinson Crusoe did on his discovering the print of the man's foot on the sand. The evening furnished me with still further cause of wonder. We raised another block in a different part of the quarry, and found **that** the area of a circular depression in the stratum **below was**

broken and flawed in every direction, as if it had been the bottom of a pool recently dried up, which had shrunk and split in the hardening. Several large stones came rolling down from the diluvium in the course of the afternoon. They were of different qualities from the sandstone below, and from one another; and, what was more wonderful still, they were all rounded and water-worn, as if they had been tossed about in the sea, or the bed of a river, for hundreds of years. There could not, surely, be a more conclusive proof that the bank which had enclosed them so long could not have been created on the rock on which it rested. No workman ever manufactures a half-worn article, and the stones were all half-worn! And if not the bank, why then the sandstone underneath? I was lost in conjecture, and found I had food enough for thought that evening, without once thinking of the unhappiness of a life of labor." pp. 7, 8.

From this time he went steadily on in his course of observation. His employment carried him to various parts of Scotland; and wherever he went, he was constantly on the watch for new discoveries. He continued a stone-mason for fifteen years, when a bank was established in his native town of Cromarty, in which he received the office of accountant. After five years passed in this occupation, he attracted the attention of the public by a letter addressed to Lord Brougham, at the time when the contest in the Church of Scotland was brought to a close by the decision of the House of Lords in the Auchterarder case. This letter was so much admired, that the party which was about to leave the establishment selected the writer of it as the most fitting person for editing the "Witness" newspaper, the principal metropolitan organ of the Free Church. The great success this journal has had is principally owing to the excellent articles, political, ecclesiastical, and geological, which have been written for it by Mr. Miller.

Previous to this time, his remarkable discoveries in the Old Red Sandstone had made him celebrated among the first geologists of the age; and he now embodied these discoveries in the volume of which we are writing. Never had fishes so fascinating a historian. Their dry bones wake into life beneath his pen, and scenes of the antediluvian world almost become matters of personal knowledge to us. The closing chapters of the volume, in which he describes what he supposes to have been the order of creation, are written with a

degree of scenic effect and rhetorical power which is seldom equalled; and yet they do not lead us to suspect that the author is striving after fine writing. There is always a freshness and native elegance in the flow of his paragraphs, that show them to be the result of the overflowing fulness of his thought and imagination, rather than the effects of elaborate study.

There are those who object to geological science, because they think it founded too much on mere speculation and theorizing; and, no doubt, it is often fairly exposed to this censure. The imagination has so vast a field to expatiate in, that it is not wonderful if it now and then wanders beyond the limits of induction, and strives to establish theories before it is in possession of facts on which to build them. This has been the capital mistake of the favorers of "the development theory." They have assumed, on negative evidence, every thing they wished to find true; and so have gone on to build up castles in the air, whose shadowy foundations are fast vanishing before the steady progress of the science which such inquirers as Mr. Miller, who love the truth better than their own fancies, are steadily building up. Our author's mind offers a beautiful illustration of the truth, that a really fine imagination always limits itself within the bounds of nature. He is never carried away by its power beyond his own control; but only soars aloft to look down upon nature from those empyreal heights that owe their lustre to the Divine Truth.

We shall not undertake to follow this writer through his years of observation, the results of which are embodied in this volume; for the narrative is so full of facts and thoughts that it is impossible to give an adequate idea of it by striving to press it into a smaller compass. We cannot, however, quit it without giving a few more extracts illustrating the author's happy style and wide range of illustration. He lets us into some secrets touching the elaboration of mineral springs, that may be new to some of our readers, and which go to show that the influences of burial grounds are not always so prejudicial in a sanitary point of view as has been believed.

"I have said that the waters of the well of the coal-heugh are chalybeate — a probable consequence of their infiltration through

the iron oxides of the superior beds of the formation, and their subsequent passage through the deep red strata of the inferior bed. There could be very curious chapters written on mineral springs, in their connection with the formations through which they pass. Smollett's masterpiece, honest old Matthew Bramble, became thoroughly disgusted with the Bath waters on discovering that they filtered through an ancient burying-ground belonging to the Abbey, and that much of their peculiar taste and odor might probably be owing to the 'rotten bones and mouldering carcasses' through which they were strained. Some of the springs of the Old Red Sandstone have also the churchyard taste, but the bones and carcasses through which they strain are much older than those of the Abbey burying-ground at Bath. The bitumen of the strongly impregnated rocks and clay-beds of this formation, like the bitumen of the still more strongly impregnated limestones and shales of the Lias, seems to have had rather an animal than vegetable origin. The shales of the Eathie Lias burn like turf soaked in oil, and yet they hardly contain one per cent. of vegetable matter. In a single cubic inch, however, I have counted about eighty molluscous organisms, mostly ammonites, and minute striated scallops; and the mass, when struck with the hammer, still yields the heavy odor of animal matter in a state of decay. The lower fish-beds of the Old Red are, in some localities, scarcely less bituminous. The fossil scales and plates, which they enclose, burn at the candle; they contain small cavities filled with a strongly scented, semi-fluid bitumen, as adhesive as tar, and as inflammable; and for many square miles together, the bed is composed almost exclusively of a dark-colored, semi-calcareous, semi-aluminous schist, scarcely less fetid, from the great quantity of this substance which it contains, than the swine-stones of England. Its vegetable remains bear but a small proportion to its animal organisms; and from huge accumulations of these last, decomposing amid the mud of a still sea, little disturbed by tempests or currents, and then suddenly interred by some widely spread catastrophe, to ferment and consolidate under vast beds of sand and conglomerate, the bitumen seems to have been elaborated. These bituminous schists, largely charged with sulphuret of iron, run far into the interior, along the flanks of the gigantic Ben Nevis, and through the exquisitely pastoral valley of Strathpeffer. The higher hills which rise over the valley are formed mostly of the great conglomerate — Knockferil, with its vitrified fort — the wooded and precipitous ridge over Brahan — and the middle eminences of the gigantic mountain on the north; but the bottom and the lower slopes of the valley are occupied by the bituminous and sulphurous schists of the fish-bed, and in these,

largely impregnated with the peculiar ingredients of the formation, the famous medicinal springs of the Strath have their rise. They contain, as shown by chemical analysis, the sulphates of soda, of lime, of magnesia, common salt, and, above all, sulphuretted hydrogen gas — elements which masses of sea-mud, charged with animal matter, would yield as readily to the chemist as the medicinal springs of Strathpeffer. Is it not a curious reflection, that the commercial greatness of Britain, in the present day, should be closely connected with the towering and thickly spread forests of arboraceous ferns and gigantic reeds — vegetables of strange form and uncouth names — which flourished and decayed on its surface, age after age, during the vastly extended term of the carboniferous period, ere the mountains were yet upheaved, and when there was as yet no man to till the ground? Is it not a reflection equally curious, that the invalids of the present summer should be drinking health, amid the recesses of Strathpeffer, from the still more ancient mineral and animal debris of the lower ocean of the Old Red Sandstone, strangely elaborated for vast but unreckoned periods in the bowels of the earth? The fact may remind us of one of the specifics of a now obsolete school of medicine, which flourished in this country about two centuries ago, and which included in its *materia medica* portions of the human frame. Among these was the flesh of Egyptian mummies, impregnated with the embalming drugs — the dried muscles and sinews of human creatures who had walked in the streets of Thebes or of Luxor three thousand years ago." pp. 180–84.

The eleventh chapter is devoted to Geological Physiognomy, and describes the effect of the formations buried beneath the surface of the earth upon the superincumbent scenery. We give a short extract, as a specimen of the graceful manner in which the subject is treated.

"Physiognomy is no idle or doubtful science in connection with Geology. The physiognomy of a country indicates, almost invariably, its geological character. There is scarce a rock among the more ancient groups that does not affect its peculiar form of hill and valley. Each has its style of landscape; and as the vegetation of a district depends often on the nature of the underlying deposits, not only are the main outlines regulated by the mineralogy of the formations which they define, but also in many cases the manner in which these outlines are filled up. The coloring of the landscape is wellnigh as intimately connected with its Geology as the drawing. The traveller passes through a mountainous region of gneiss. The hills, which, though bulky, are shapeless

raise their huge backs so high over the brown, dreary moors, which, unvaried by precipice or ravine, stretch away for miles from their feet, that even amid the heats of midsummer the snow gleams in streaks and patches from their summits. And yet so vast is their extent of base, and their tops so truncated, that they seem but half-finished hills notwithstanding — hills interdicted somehow in the forming, and the work stopped ere the upper stories had been added. He pursues his journey, and enters a district of micaceous schist. The hills are no longer truncated, or the moors unbroken; the heavy ground-swell of the former landscape has become a tempestuous sea, agitated by powerful winds and conflicting tides. The picturesque and somewhat fantastic outline is composed of high, sharp peaks, bold, craggy domes, steep, broken acclivities, and deeply serrated ridges; and the higher hills seem as if set round with a framework of props and buttresses, that stretch out on every side like the roots of an ancient oak. He passes on, and the landscape varies; the surrounding hills, though lofty, pyramidal, and abrupt, are less rugged than before; and the ravines, though still deep and narrow, are walled by ridges no longer serrated and angular, but comparatively rectilinear and smooth. But the vegetation is even more scanty than formerly; the steeper slopes are covered with streams of debris, on which scarce a moss or lichen finds root; and the conoidal hills, bare of soil from their summits half way down, seem so many naked skeletons, that speak of the decay and death of nature. All is solitude and sterility. The territory is one of quartz rock. Still the traveller passes on: the mountains sink into low swellings; long rectilinear ridges run out towards the distant sea, and terminate in bluff, precipitous headlands. The valleys, soft and pastoral, widen into plains, or incline in long-drawn slopes of gentlest declivity. The streams, hitherto so headlong and broken, linger beside their banks, and then widen into friths and estuaries. The deep soil is covered by a thick mantle of vegetation — by forest trees of largest growth, and rich fields of corn; and the solitude of the mountains has given place to a busy population. He has left behind him the primary regions, and entered on one of the secondary districts." pp. 190, 191.

In the description of the transmutation of matter through various forms during the progress of ages, we find the following striking passage: —

“The passage of metals from lower to higher formations, and from one combination to another, constitutes surely a highly interesting subject of inquiry. The transmission of iron in a chemical form, through chalybeate springs, from deposits in which it

had been diffused in a form merely mechanical, is of itself curious ; but how much more so its passage and subsequent accumulation, as in bog-iron and the iron of the Coal Measures, through the agency of vegetation ! How strange, if the steel axe of the woodman should have once formed part of an ancient forest ! — if, after first existing as a solid mass in a primary rock, it should next have come to be diffused as a red pigment in a transition conglomerate — then as a brown oxide in a chalybeate spring — then as a yellowish ochre in a secondary sandstone — then as a component part in the stems and twigs of a thick forest of arborescent plants — then again as an iron carbonate, slowly accumulating at the bottom of the morass of the Coal Measures — then as a layer of indurated bands and nodules of brown ore, underlying a seam of coal — and then, finally, that it should have been dug out, and smelted, and fashioned, and employed for the purpose of handicraft, and yet occupy, even at this stage, merely a middle place between the transmigrations which have passed, and the changes which are yet to come. Crystals of galena sometimes occur in the nodular limestones of the Old Red Sandstone ; but I am afraid the chemist would find it difficult to fix their probable genealogy.” pp. 236, 237.

But we must quit this charming volume, and pass on to the next work published by Mr. Miller, entitled “ First Impressions of England and its People ; ” a work until lately a stranger on this side of the Atlantic, though six years old in its native land. Forced by ill health to abandon his intention of completing his geological survey of Scotland by devoting an autumn’s vacation to the Orkneys, he turned his steps southward ; and for the first time in his life, passed into England, hoping to find in its milder climate, and easier modes of travelling, a refreshment he could not look for in a tour among the rude islands of the north. In pursuance of this plan, he traversed the length of England, confining himself chiefly to the midland districts, and gathering information at every step. If any country in the world has been *betrayelled* till one may despair of finding any thing new in a volume upon the subject, it is England ; yet this book appears as fresh as if it were the first that had been written upon this topic. So true is it, that a really intelligent mind finds new food for thought in whatever subject it approaches, and stamps with originality every impression it receives.

Mr. Miller’s leading purposes in this journey were to study the common people of England, and see how they compared

with those of Scotland ; to observe the geology of the country wherever he went ; to visit the great Cathedrals, where he might see how the Church of England contrasted with his own dearly loved Presbyterian Church at home ; and to visit the former homes of Shakspeare and of several poets of the last century, whose writings seem almost part and parcel of his own mind. The volume contains an unusual variety of information, conveyed in a style so concise as never to weary, and so pointed and graceful as always to attract.

Of the twenty chapters, eight are given almost exclusively to the poets ; and contain very interesting descriptions of Hagley, the Leasowes, Olney, and Stratford, combined with various criticisms, not only on the poets whose names have rendered these spots classic ground, but upon a variety of other writers, who are associated with them in his mind ; showing that he is quite as familiar with the men of the present geologic period as with the ichthyolites of fossil ages.

The people he finds much less intelligent than those of his own country ; and this he attributes to the religious freedom of Scotland, which, he says, has done more towards awakening the intellects of the people, and teaching them how to think, than all the Societies for the Diffusion of Useful Knowledge, and the Penny and Saturday Magazines, will ever do for the English people. This, we doubt not, is true ; for thought is but a lifeless thing while it deals merely with what is actual and present in this world ; and becomes a life-giving power only when it is infused with those eternal truths that take hold on our being, by teaching us that all of the present is to stamp with its seal all of the future.

Geological observations occasionally occupy whole chapters, and here and there appear pleasantly in unexpected places. For instance, in passing through Durham, the traveller stops just long enough to take a twilight survey of the great Cathedral ; but a slab of limestone attracts him away from examining its "Babylonish magnificence," and he thus discourses of an antiquity in comparison with which the age of the Cathedral is but infantile : —

"The rain was dashing amid the tombstones outside. One antique slab of blue limestone beside the pathway had been fretted many centuries ago into the rude semblance of a human figure ; but the compact mass, unfaithful to its charge, had

resigned all save the general outline ; the face was worn smooth, and only a few nearly obliterated ridges remained, to indicate the foldings of the robe. It served to show, in a manner sufficiently striking, how much more indelibly nature inscribes her monuments of the dead than art. The limestone slab had existed as a churchyard monument for perhaps a thousand years ; but the story which it had been sculptured to tell had been long since told for the last time ; and whether it had marked out the burial-place of priest or of layman, or what he had been or done, no one could now determine. But the story of an immensely earlier sepulture — earlier, mayhap, by thrice as many twelve-months as the thousand years contained days, — it continued to tell most distinctly. It told that when it had existed as a calcareous mud deep in the carboniferous ocean, a species of curious zoöphyte, long afterwards termed *Cyathophyllum fungites*, were living and dying by myriads ; and it now exhibited on its surface several dozens of them, cut open at every possible angle, and presenting every variety of section, as if to show what sort of creatures they had been. The glossy wet served as a varnish ; and I could see that not only had those larger plates of the skeletons that radiate outwards from the centre been preserved, but even the microscopic reticulations of the cross partitioning. Never was there ancient inscription held in such faithful keeping by the founder's bronze or the sculptor's marble ; and never was there epitaph of human composition so scrupulously just to the real character of the dead." pp. 39, 40.

The Church of England fares but poorly in his estimation. He looks upon it as a thing dead and gone ; a relic of past ages, that has ceased to exert any vital influence over mankind ; a thing simply of set forms, to gratify the taste of a class of people too decent to abandon religion entirely, yet too indifferent to desire any thing higher or deeper than fine churches and imposing ceremonies. He feels no bitterness against it, because looking upon it simply as a matter of fashion, — a seeking after the mediæval by persons too conservative to perceive the existence of to-day — it is a thing merely to smile at, as one would at the restoration of the fantastic colors and forms of mediæval costume in the fashions of the present time. He first attends service in York Minster, and thus describes what he heard and saw : —

"The presiding churchman, on the occasion, was Dean Cockburn, — a tall, portly old man, fresh-complexioned and silvery-haired, and better fitted than most men to enact the part of an

imposing figure in a piece of impressive ceremony. I looked at the dean with some little interest ; he had been twice before the public during the previous five years, — once as a dealer in church offices, for which grave offence he had been deprived by his ecclesiastical superior, the archbishop, but reponed by the queen, — and once a redoubtable assertor of what he deemed Bible cosmogony, against the facts of the geologists. The old blood-boltered barons who lived in the times of the Crusades used to make all square with Heaven, when particularly aggrieved in their consciences, by slaying a few scores of infidels a-piece ; the dean had fallen, it would seem, in these latter days, on a similar mode of doing penance, and expiated the crime of making canons residuary for a consideration, by demolishing a whole conclave of geologists.

“ The cathedral service seemed rather a poor thing, on the whole. The coldly-read or fantastically-chanted prayers, commonplace by the twice-a-day repetition of centuries ; the mechanical responses, the correct inanity of the choristers, who had not even the life of music in them ; the total want of lay attendance, for the loungers who had come in by the side-door went off *en masse* when the organ had performed its introductory part, and the prayers began ; the ranges of empty seats, which, huge as is the building which contains them, would scarce accommodate an average-sized Free Church congregation, all conspired to show that the cathedral service of the English Church does not represent a living devotion, but a devotion that perished centuries ago. It is a petrification, a fossil, existing, it is true, in a fine state of keeping, but still an exanimate stone. Many ages must have elapsed since it was the living devotion I had witnessed on the previous evening in the double-bedded room, if, indeed, it was ever so living a devotion, or aught, at best, save a mere painted image. Not even as a piece of ceremonial is it in keeping with the august edifice in which it is performed. The great organ does its part admirably, and is indisputably a noble machine ; its thirty-two feet double-wood diapason pipe, cut into lengths, would make coffins for three Goliahs of Gath, brass armor and all : but the merely human part of the performance is redolent of none of the poetry which plays around the ancient walls, or streams through the old painted glass. It reminded me of the story told by the eastern traveller, who, in exploring a magnificent temple, passed through superb porticoes and noble halls, to find a monkey enthroned in a little dark sanctum, as the god of the whole.”

The fervor of Presbyterian zeal peeps out here ; but the remarks are amusing, whatever we may think of their justness. At the collegiate church in Manchester, he hears a sermon

on saints' days, that tickles his Scotch ears by its curiously manifested zeal in the cause ; but he finds to his surprise that the preacher is not a Puseyite, but one of the class of "stiff High Churchmen that germinate into Puseyites when their creed becomes vital." He states his theory regarding the difference between the two in this form : "The High Churchman bears, it would appear, the same sort of resemblance to the energetic Puseyite, that a dried bulb in the florist's drawer does to a bulb of the same species in his flower-garden, when swollen with the vegetative juices, and rich in leaf and flower."

The volume abounds in fine descriptions of natural scenery, and we think that something of the distinctness and vivid picturesqueness of these descriptions is owing to the geologic eye with which he surveys the landscape. Of the aid which geology may furnish to the descriptions of the tourist, he says, —

"A minute anatomical acquaintance with the bones and muscles is deemed essential to the painter who grapples with the difficulties of the human figure. Perhaps, when the geological vocabulary shall have become better incorporated than at present with the language of our common literature, a similar acquaintance with the stony science will be found scarce less necessary to the writer who describes natural scenery. Geology forms the true anatomy, the genuine osteology of landscape ; and a correct representation of the geological skeleton of a locality will be yet regarded, I doubt not, as the true mode of imparting adequate ideas of its characteristic outlines." p. 121.

We have not space to follow Mr. Miller in his varied geological observations ; but we give one pleasing specimen of his imaginings as he closes a survey of the great geologic changes that have swept over the surface of the globe.

"As we descend towards the present state of things, and lands and seas approximate to their existing relations, the geographic data become more certain. One side of the globe has, we find, its vanishing continent, the other its disappearing ocean. The northern portion of our own country presents almost the identical outline which the modern geographer transfers to his atlas, save that there is here and there a narrow selvage clipped off and given to the sea, and that while the loftier headlands protrude as far as now into the ocean, the friths and bays sweep further inland ; but in the southern part of the island the map is greatly different ; a broad channel sweeps onwards through the middle of the land ; and the Highlands of Wales, south and north, exist as

a detached, bold-featured island, placed half-way between the coasts of England and Ireland. I found it exceedingly pleasant to lie this day on the soft short sward, and look down through the half-shut eye, as the clouds sailed slowly athwart the landscape, on an apparition of this departed sea, now in sunshine, now in shadow. Adventurous keel had never ploughed it, nor had human dwelling arisen on its shores ; but I could see, amid its deep blue, as the light flashed out amain, the white gleam of wings around the dark tumbling of the whale and the grampus ; and now, as the shadows rested on it dim and sombre, a huge shoal of ice-floes came drifting drearily from the north, the snow-laden rack brushing their fractured summits, and the stormy billows chafing angrily below.

“ Was it the sound of the distant surf that was in mine ears, or the low moan of the breeze, as it crept through the neighboring wood ? O, that hoarse voice of Ocean, never silent since time first began, where has it not been uttered ! There is stillness amid the calm of the arid and rainless desert, where no spring rises and no streamlet flows, and the long caravan plies its weary march amid the blinding glare of the sand, and the red unshaded rays of the fierce sun. But once and again, and yet again, has the roar of Ocean been there. It is *his* sands that the winds heap up ; and it is the skeleton remains of his vassals — shells, and fish and the stony coral — that the rocks underneath enclose. There is silence on the tall mountain-peak, with its glittering mantle of snow, where the panting lungs labor to inhale the thin bleak air, where no insect murmurs and no bird flies, and where the eye wanders over multitudinous hill-tops that lie *far beneath*, and vast dark forests that sweep on to the distant horizon, and along long hollow valleys where the great rivers begin. And yet once and again, and yet again, has the roar of Ocean been there. The effigies of his more ancient denizens we find sculptured on the crags, where they jut from beneath the ice into the mist-wreath ; and his later beaches, stage beyond stage, terrace the descending slopes. Where has the great destroyer not been, the devourer of continents, the blue foaming dragon, whose vocation it is to eat up the land ? His ice-floes have alike furrowed the flat steppes of Siberia and the rocky flanks of Schehallion ; and his nummulites and fish lie imbedded in great stones of the pyramids, hewn in the times of the old Pharaohs, and in rocky folds of Lebanon still untouched by the tool. So long as Ocean exists, there must be disintegration, dilapidation, change ; and should the time ever arrive when the elevatory agencies, motionless and chill, shall sleep within their profound depths, to awaken no more, and should the sea still continue to impel its currents

and to roll its waves, every continent and island would at length disappear, and again, as of old, 'when the fountains of the great deep were broken up,'

'A shoreless ocean tumble round the globe.'

Was it with reference to this principle so recently recognized, that we are so expressly told in the Apocalypse respecting the renovated earth, in which the state of things shall be fixed and eternal, that 'there shall be no more sea'? or are we to regard the revelation as the mere hieroglyphic, the pictured shape, of some analogous moral truth? 'Reasoning from what we know,'—and what else remains to us?—an earth without a sea would be an earth without rain, without vegetation, without life, a dead and doleful planet of waste places, such as the telescope reveals to us in the moon. And yet the Ocean does seem peculiarly a creature of time,—of all the great agents of vicissitude and change, the most influential and untiring; and to a state in which there shall be no vicissitude and no change,—in which the earthquakes shall not heave from beneath, nor the mountains wear down and the continents melt away,—it seems inevitably necessary that there should be 'no more sea.'

"But, carried away by the speculation, I lag in my geological survey." pp. 226–228.

The third and most remarkable of Mr. Miller's works, "Foot Prints of the Creator," was the one by which he first became generally known in this country; and the theologian and the geologist owe him a tribute of gratitude for the equal service he has rendered in it to their respective sciences. But this volume has already been noticed in our pages, and we need not recur to it.

The third book on our list, "The Course of Creation," is devoted entirely to geology, and is of a more elementary character than the others. The beginner in science finds here an explanation of terms, and an unfolding of the rudiments of geology, that will prepare him for reading works of a higher character. Dr. Anderson writes with clearness and simplicity, and his work is decidedly interesting; but there is an appearance of effort in his style, and he is deficient in the glow of poetic enthusiasm and the rhetorical elegance so attractive in the volumes we have been considering. The spirit of the work is, however, excellent; and we doubt not it will do much service in awakening an interest in geological subjects among persons who are capable of enjoying such

pursuits, if their minds are but roused to observe the phenomena of the world around them. Many branches of science require libraries, or expensive apparatus, in order that they may be studied to advantage ; but the apparatus of the geologist is spread around him by the hand of the Creator, and he has but to open his eyes and see ; while a very small sum suffices to purchase books sufficient for his purpose. We rejoice in the multiplication of elementary works in all those sciences, the objects of which are thus spread abroad free for the observation of all, as if to provide food for every intelligent and thoughtful mind. Every man, who aids in awakening an interest in such things, should be accounted a true philanthropist ; for no one contributes more to the happiness and wellbeing of mankind, by supplying with healthful nutriment minds that must find food somewhere, and will satisfy themselves with that which is unwholesome, if the wholesome be not provided for their use.

The general subject of geology is illustrated in this volume by the formations displayed in Scotland, England, France, and Switzerland. Commencing with the Ben Mac Dhui group of Scottish mountains, the oldest formation of the eastern hemisphere, Dr. Anderson describes with considerable minuteness the primitive and secondary systems of Scotland ; and then, passing into England, dwells upon the rich fossil deposits of the later formations. Crossing the channel, he then traverses France, and revels for a while among the Alpine heights and glaciers. Then taking a general survey of the whole subject, he indulges in theorizing about the course of creation and the probable age of the world. With this sort of speculation we have little sympathy ; for it seems an idle waste of wit, to calculate how many millions of years were required by the Almighty for preparing the earth to become the home of rational beings. When we read that in all probability sixteen millions of years passed away during this process, we believe it just as probable that the number, with an equal chance of accuracy, might be replaced by six or by sixty millions. Because we know that the Mississippi or the Ganges deposits a certain depth of earth every year at its mouth, we cannot feel sure that we possess data by which to calculate the time consumed in depositing sandstone ten thousand feet in depth ; for we know nothing

of the forces brought into activity for performing the task. Compared with any thing we now know, they may have been as a locomotive compared with an insect, — or the direct reverse. Those who undertake the measurement of antediluvian forces by using one of our rivers as a standard, begin with an assumption which must always remain destitute of proof; they assume that the forces in operation, and the modes of operation, have never undergone a change. When geology is treated as an inductive science, it surely possesses enough of interest to satisfy any rational mind. But when the geologist, wandering away from induction, builds out of assumed premises theories that can never become demonstrated facts, we feel that he is doing a wrong to a noble subject; — a subject poetical enough in that which it clearly reveals to make it independent of all aid from fictitious ornament.

We do not mean to characterize Dr. Anderson's work as very strongly tinctured with this kind of theorizing; though we should have liked it better had such fancies been omitted entirely. But instead of dwelling upon a fault which is generally esteemed as venial, we will give some specimens of the author's mode of treating the subject.

At the commencement of the volume, we find this description of the view seen from Ben Mac Dhui: —

“The view from this remarkable group of mountains — the most remarkable by far in the island — differs much from any other with which I am acquainted. The impressions at first are all very confused, and some time is required to resolve into distinct pictures the wondrous panorama before you. We have stood upon Skiddaw, where every thing is clear, distinct, and palpable in distance and form; on Ben Lomond, where the far stretch of perspective over lakes, rivers, and plains is like a first lesson in painting; on Ben Lawers, where the eye sweeps rapidly over well known, familiar objects, spots of wood, glen, and mansion; on Ben Nevis, where you fancy yourself in mid air, every object is so separate and apart, and so disposed the whole you are looking on, that the view is all *downward* upon the picture. But here, these dark giant masses crowd as it were against you. There is a struggle for the post of elevation. You are highest, no doubt of that; but so jealous all are these proud sombre peaks, that every one seems to overlook, though yet actually beneath, the broad ample table-head of the centre of the group. Sometimes one is tempted to leap across the narrow dells of separation, and at once master

the geology of the district, so near seems every hill-top as almost to be touched. But as you approach their several positions, expanding valleys, deep fathomless chasms, and the channels of noble rivers, bar farther approach, and attest the wide, independent domains of each. They are monarchs every one of them — Brae-Riach, Cairn-Toul, Cairn-Gorm, Ben-Avon, Ben-y-Bourd — each holds his own regal court, over tarn, lake, and stream ; torrents, cataracts, and all the appurtenances of the boldest mountain scenery.

“ After one has time to gather up his thoughts and perceptions, the scene resolves itself, still indeed as of one whole, but of distinct component parts. In the far distance, you attempt in vain to number the peaks that everywhere rise against the sky line ; but more closely around, five or six summits are seen to spring from a single root ; a common circumference marks out the limits of the group ; and, by no unreasonable liberty with the imagination, you easily replace the old materials into the vacant interstices, before the water had begun its work of abrasion, or the earthquake coming to its assistance shivered their solid rounded forms into these hideous, precipitous gorges and chasms. The great hills here stand, every one of them, upward of four thousand feet above the level of the sea ; and when entire, one aggregated whole, as possibly they originally were, the centre mass may have towered thousands more into the overhanging firmament. The scene is utterly unmatched, as it cannot be described, by any other in Great Britain ; and make your ascent when you may, there are sights and objects to be met with at every step, in every salient dell, that will cause you evermore to rejoice you commenced your travels among the Aiguilles of Ben Muich Dhui.

“ It is in the great mountain groups that the true key is to be found to the science of geology, as well as all those collateral circumstances which impart so much charm to it as a healthful and invigorating exercise to mind and body. Here, amidst these piled-up masses, we are furnished with the lowest ascertained sections of the earth's crust, from which we can at once study the nature of its rocky divisions, and the laws which prevail in the order of their superposition. When the world was in its primeval state of chaos, without form and void, we are warranted to assume that the mountains as yet had no place on its surface, but subsequently arose out of the bosom of the deep ; and lifted up, as they emerged above the waters, the rocky strata already enveloping the globe. These strata are still to be seen folded round the central masses, disrupted and torn like a garment too tight for the body, and displaying through innumerable cracks and fissures the inclosed rocks.” pp. 15 – 17.

On passing from Scotland to England, the striking difference between the two countries is thus portrayed.

“Differing as England does in people, manners, language, laws, and institutions from Scotland, a still greater difference will be found to exist in the physical structure, the mineral qualities, the organic remains, and in all the other phenomena of her geological development. In the ascending series of rocks, Scotland furnishes only a few steps of the building — the lower courses of a gigantic pyramid; across the borders, strata upon strata follow each other in regular gradation, until they attain their apex of elevation in the centre of the capital. Another distinction exists in the quantity and extent of those rocks which are common to both countries. All the primary, transition, and igneous formations are more abundant in the northern division of the island, constituting nearly three fourths of its surface, while in the southern division they do not amount to a fiftieth part; but, on the other hand, the secondary and tertiary formations, which in Scotland are scarcely recognized, or only found in patches, form in England about two thirds of its superficial area. Hence, on English ground, a new interest begins as a totally new series of mineral strata rises into view, and all charged with types and families of creatures of equally new and marvellous organization.

“The new series of rocks to be described, are termed the Permian, triassic, oolitic, cretaceous, and tertiary systems. Some of these deposits are of vast thickness and extent. They all abound in fossils, some in the greatest profusion, others only in the rarest and most remarkable types. In consequence of these accumulations, England, as compared with her sister kingdom, may be described as the full organic form in bones, muscles, and fleshy appendages, plump and rounded all over, where one sees little of the framework or internal ossification. The great masses are so covered over, the ribs and members are so silted up, that the ridges and hills of the country, save on the outskirts, dwindle into insignificance. Every original depression has been concealed, new increments of matter are everywhere added, layer upon layer superinduced, until the older fabric is nearly obliterated, or only at wide intervals observed to rise above the surface. Scotland exhibits the huge trunk, stripped and laid bare; every yielding thing has been eroded and torn off; and little remains, except the giant skeleton, the lineamentary fragments of the primeval world.” pp. 160, 161.

Dr. Anderson is a clergyman, and is deeply and wisely impressed with the truth, that a just contemplation of the wonders of creation must draw the heart upward to a fuller

consciousness of that Divine presence which abides everywhere, a living, sustaining, conscious power, upholding the universe. The final chapter of this volume is devoted to a discussion of this point, and we end our remarks by giving his closing paragraph.

“ Thus, step by step, we rise to the loftiest conception which the human mind can embrace — the conception of a God — the personality, unity, and perfection of his being. How the conception of a Creator is formed we cannot otherwise describe than by saying, that it springs up in the mind immediately upon the perception of an external world. It is not so much an exercise of reason, or elaborate effort of the understanding ; but is rather a direct impression, traced at once upon the soul, as the image of Deity reflected from his works. All men possess it, for all men are so constituted, that they cannot look upon creation without the idea of a Creator accompanying and flowing from the act. The conception will be obscure, vague, and indistinct, according to the capacity, improvement, and general knowledge of the individual. But the conception is there, as necessarily as the effect follows the cause, the shadow the substance, the image the object which occasioned it. The heavens DECLARE the glory of God, the firmament SHOWS his handiwork, the earth bears the traces of his path. And just in the degree in which we study and examine his works — their uses and adaptations — their infinite variety, proportions, regularity, and magnitude — are our convictions of his existence deepened, our admiration of his being and attributes enhanced, our feeling of security under his rule strengthened, and our sense of obligation and responsibility increased and solemnized. Ignorance does not obliterate the sense of Deity ; it confuses and multiplies the image of his existence ; it leads to polytheism. Knowledge brightens the picture, and represents the Creator, as reflected in his works, EXCELLENT, GLORIOUS, AND INFINITELY PERFECT.” pp. 375, 376.

The last book on our list, ‘The Poetry of Science,’ is devoted to the general subject of physics. The author looks upon the truths of nature as so much more extraordinary than the fictions of the imagination, that he commands the poet to resort for his illustrations to the fields of science rather than the realms of fancy. We think the volume might more appropriately have been called “The Wonder-book of Science ;” for, to our mind, poetry lies less in facts than in costume ; and we are not prepared to accept the idea, that the extraordinary and the incomprehensible are

necessarily the poetical. Nothing is poetical until it is poetically discerned, and then the most common objects are found to be full of the subtle essence of poetry, waiting only for the "vision and the faculty divine" to win it forth. We will not, however, undertake a dissertation on the nature of true poetry, but will let the author speak for himself.

"The spiritual beings, which the poet of untutored nature gave to the forest, to the valley, and to the mountain, to the lake, to the river, and to the ocean, working within their secret offices, and moulding for man the beautiful or the sublime, are but the weak creations of a finite mind, although they have for us a charm which all men unconsciously obey, even when they refuse to confess it. They are like the result of the labors of the statuary, who, in his high dreams of love and sublimated beauty, creates from the marble block a figure of the most exquisite moulding which mimics life. It charms us for a season; we gaze and gaze again, and its first charms vanish; it is ever and ever still the same dead heap of chiselled stone. It has not the power of presenting to our wearying eyes the change which life alone enables matter to give; and we admit the excellence of the artist, but we cease to feel at his work. The poetical creations are pleasing, but they never affect the mind in the way in which the poetic realities of nature do. The sylph moistening a lily is a sweet dream; but the thoughts which rise when first we learn that its broad and beautiful dark-green leaves, and its pure and delicate flower, are the results of the alchemy which changes gross particles of matter into symmetric forms,—of a power which is unceasingly at work under the guidance of light, heat, and electrical force,—are, after our incredulity has passed away—for it is too wonderful for the untutored to believe at once—of an exalting character.

"The flower has grown under the impulse of principles which have traversed to it on the beam of solar light, and mingled with its substance. A stone is merely a stone to most men. But within the interstices of the stone, and involving it like an atmosphere, are great and mighty influences, powers which are fearful in their grander operations, and wonderful in their gentler developments. The stone and the flower hold, locked up in their recesses, the three great known forces,—light, heat, and electricity; and, in all probability, others of a more exalted nature still, to which these powers are but subordinate agents. Such are the facts of science, which, indeed, draw "sermons from stones," and find "tongues in trees." How weak are the creations of romance, when viewed beside the discoveries of

science! One affords matter for meditation, and gives rise to thoughts of a most ennobling character; the other excites for a moment, and leaves the mind vacant or diseased. The former, like the atmosphere, furnishes a constant supply of the most healthful matter; the latter gives an unnatural stimulus, which compels a renewal of the same kind of excitement, to maintain the continuation of its pleasurable sensations." pp. 219, 220.

We cannot indorse the views here expressed in relation to art; for *true* works of art, in whatever department, are as constant in their effects, and as suggestive, as the works of nature. The hand of the artist, when he is truly inspired, is a medium for the Divine Power, no less than the lifeless atoms with which He works out the forms of nature.

The size of this volume, of course, makes it one to stimulate, rather than satisfy, the curiosity of those who feel an interest in such subjects. Each department treated would demand a book as large as this to give any thing like a distinct view of its philosophy. Like most popular courses of lectures, the work does not convey enough information on any one subject to be of much value, or to make sufficient impression upon the mind to be long retained; and like them, its chief use must be, by rousing curiosity, to send the mind in pursuit of more thorough information from richer sources.

The present plan of popular instruction is much like that of electrotyping a cheap substance with one of the precious metals; an extremely thin coating gives the appearance of solid silver. We do not object in the least to this process, provided the difference between the two things is acknowledged; but when, as is too often the case, the thinnest gilding presumes to call itself solid gold, we are almost ready to think that popular education, after all, is a mere cheat. The truth seems to be, that very few persons have any desire for information any farther than it serves to amuse an idle hour; and as it is information only of the most superficial kind that can answer such a purpose, the demand for popular lectures and superficial treatises must always far exceed that for works of sterling value. We should not complain, however, for all minds ought to receive what they crave, if it be not positively evil; but it is the duty of writers to strive to elevate the popular standard as much as possible. To know a little of many things is the prevalent

fashion of the day ; but to know a few things well demands a much more healthful effort of the mind, and enriches it proportionally.

If Mr. Hunt's book leads persons to seek to know more than he tells them, it is a useful publication ; but if it is regarded as sufficient by itself, we cannot say much for those who make use of it ; because it can do little more than satisfy a childish love for the wonderful. We believe the author intended that his work should serve the better purpose ; for his own mind seems to be elevated and enriched by his studies, and excited to draw others to the contemplation of that which evidently gives him so much pleasure. We hope that the time may come when the popular mind may be so far enlightened, that the poet and the orator may draw illustrations from science without making themselves unintelligible ; but it will be from the beautiful adaptations of nature, rather than from its wonders, that they will feed the fires of inspiration. Whatever view we may take of the value of many of the popular scientific books of the day, their number and their ready sale show that the public mind is awake, as it never was before, to subjects that were formerly entirely sealed from its inquiry ; and while we look in dismay upon the heap of worse than useless trash that now answers the demand for "cheap reading," we may draw some consolation from the pile of scientific volumes, which is ever growing higher and broader.

ART. VII. — *The Prelude, or Growth of a Poet's Mind : an Autobiographical Poem.* By WILLIAM WORDSWORTH. New York : D. Appleton & Co. 1850. 12mo.

Memoirs of WILLIAM WORDSWORTH, Poet-Laureate, D. C. L. By CHRISTOPHER WORDSWORTH, D. D., Canon of Westminster. Edited by HENRY REED. Boston : Ticknor, Reed, & Fields. 1851. 2 vols. 12mo.

FUTURE ages will confirm the decision upon which this age has nearly agreed ; that Wordsworth is the greatest